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Report to

STAKEHOLDERS

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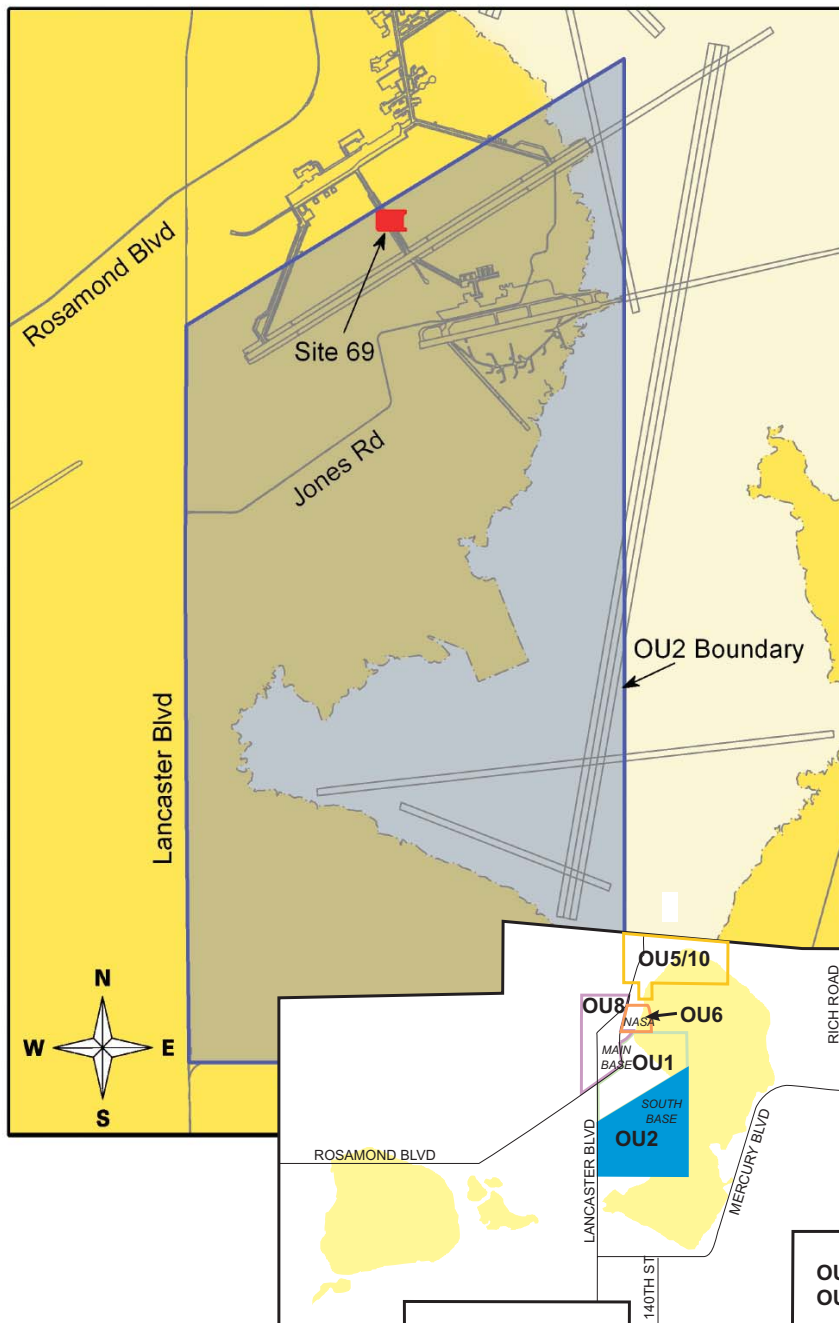
Removal, disposal of debris and recycling preferred for abandoned landfill at Site 69

3

Base wildlife biologist Mark Hagan rescues a Brown Pelican at the Base Information Transport Center parking lot.

4

Base Archaeologists personnel found a 100-year-old tricycle earlier this year, during one of the many field surveys they conduct at Edwards Air Force Base.



LOCATIONS

Environmental Restoration Program managers propose methods for cleaning up Site 69 (left), which is located in Operable Unit 2 (bottom). The site is located on the flightline where a temporary runway may be placed.

Full Coverage on Page 7

RAB Meeting Highlights

The following report highlights the latest quarterly meeting of the Restoration Advisory Board (RAB) held May 25 in Mojave, Calif.

Blast Fracturing: Installation and Evaluation of a Fractured Bedrock Zone (FBZ) at Edwards AFB Site 37 – In the latest attempt to clean up contamination at South Air Force Research Laboratory (AFRL), the Air Force used blast fracturing to increase groundwater extraction rates at Site 37. The hard granitic bedrock at South AFRL prevents efficient, cost-effective extraction of chlorinated solvent in the groundwater, explained Mark Henkes, an Earth Tech geologist. The blast-fracturing study failed to widen fractures in the bedrock and resulted in a slight decrease in groundwater extraction rates. Air Force officials are currently requesting a Technical Impracticability waiver using land-use controls and long-term monitoring for the area. Every five years, the Air Force will evaluate new technologies in further attempts to clean up Site 37.

Site 69 Action Memorandum – Environmental Restoration Program Manager Rebecca Hobbs announced a possible cleanup action at South Base's Site 69. One of the proposed routes for a temporary runway goes through Site 69. If the Site 69 route is selected, a public comment period will be held before the contractor can address the surface and subsurface debris and stained soil at the site. If the runway does not go through Site 69, the site's cleanup will be discussed during the Operable Unit 2 Proposed Plan public meeting.

Restoration Budget for Fiscal Year 2007 – Ai Duong, chief of the Restoration Branch, presented the budget for the 2007 fiscal year. Nearly \$21 million will be divided among 56 restoration projects. The bulk of the money (65 percent) is expected to be used for cleanup activities, with smaller amounts to fund monitoring (15 percent), management (13 percent), and study (7 percent) efforts. The maturity of the Environmental Restoration Program translates to more emphasis being placed on using proven methods to complete site cleanups. Every year, the annual budget is presented to the public representatives seeking their input about the Air Force's prioritization of the listed projects.

The next meeting of the RAB will be Aug. 17, 2006 at 5:30 p.m. in Rosamond, Calif., at the Wanda Kirk Library. The public is invited to attend.

RTS

Next RAB Meeting

Aug. 17, 2006

5:30 p.m.

Wanda Kirk Library

**3611 Rosamond Blvd.
Rosamond, CA 93560**

The public is invited.

If you have a question about the Edwards Air Force Base Environmental Management program, you may address it to Stakeholders Forum, Attn: Gary Hatch or Miriam Horning, 5 E. Popson Ave., Edwards AFB, CA 93524-8060, or send e-mail to: 95 ABW/PAE@edwards.af.mil

Report to Stakeholders is a publication of the Edwards AFB Environmental Management Division. Its purpose is to inform and educate the public, base workers and residents about continuing Environmental Management efforts at Edwards AFB. It currently has a circulation of 6,000, including about 2,000 subscribers.

Contents of the *Report to Stakeholders* are not necessarily the official view of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force.



Commander 95th Air Base Wing..... Col. H. Brent Baker
Base Civil Engineer..... James Judkins
Division Chief Environmental Management..... Robert Wood
Branch Chief Environmental Restoration..... Ai Duong
Branch Chief Environmental Conservation..... Gerald Callahan
Branch Chief Environmental Quality..... Robert Shirley



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Report to
STAKEHOLDERS

Base wildlife biologist rescues brown pelican far from home

This was no wild goose chase.

To the contrary, when Mark Hagan chased down and caught an injured brown pelican in April, it struck at the heart of his duties as Edwards Air Force Base's (AFB) Natural Resources Manager – protecting the base's natural resources.

The injured pelican was spotted by workers at the Base Information Transfer Center parking lot. It was not trying to evade people the way wildlife most often do, and it had a length of fishing line, sinkers still attached, dangling from its beak.

Of course, the workers supposed the bird had a fish hook stuck somewhere down its throat or stomach. So they called Hagan, who caught the animal without too much effort – definitely a sign that all was not right with the bird.

The bird was taken to a wildlife rehabilitation center where the prognosis looks good for a full recovery and a return to the wild.

Rare everywhere, the brown pelican – federally listed as endangered – is almost never seen anywhere but coastal areas. This is the first sighting on record of a brown pelican at Edwards AFB.

"You just don't expect to see a brown pelican in the desert," Hagan said.

By contrast its cousin, the white pelican, is plentiful and its habitat includes not only the coastal areas, but much of the interior of the United States.

Hagan said his first task was to evaluate the nature and extent of the pelican's injuries. "It didn't have a broken wing, and other than the fishing line, I couldn't see any obvious injuries," he said.

"It let me get within a few feet, but if I made a move to pick it up, it would flap its wings a bit and move a few yards away," he said.

A healthy bird would take flight long before anyone got close.

Staff at the California Wildlife Center in Calabasas, Calif., where the pelican was taken, believe the bird suffered from some illness, possibly red tide poisoning, in addition to its obvious problem – the hook, line, and sinkers.

"They said the pelican may have gotten red tide poisoning, which left it disoriented, and it flew inland instead of staying in its habitat area," Hagan said.

Red tide poisoning comes from algal blooms in the ocean. A few types of algae, often with red pigment, contain toxins that can poison the animals that directly eat the algae and on up the food chain, resulting in a string of deaths for aquatic life. Most species of algae are harmless to people and animals.

Swallowing a fish hook with a length of attached line is a fairly common injury to pelicans. It can cause death, but that most often happens when the line is long and becomes entangled in tree limbs, ensnaring the bird until it starves," Hagan said.

Hagan caught the bird with a towel and the aid of a couple of workers who were on hand. Once the bird was captured, Hagan consulted with the U.S. Fish and Wildlife Service for a recommendation on what course of action to take. They recommended the bird be taken to a rehabilitation center.

"They didn't feel the bird's chances of survival would be good



BROWN PELICAN DOWN — Base wildlife biologist, Mark Hagan captures an injured brown pelican. The pelican was sent to a rehabilitation center.

unless it was taken to a rehabilitation center," Hagan added.

The bird rescue didn't come without drawbacks – the pelican transferred a good number of pelican lice to Hagan.

"They're brown and about a quarter-inch long. They look a bit like grains of wild rice, crawling around on you," he said.

"The people from the wildlife center asked if I was covered with pelican lice. They were chuckling when I said I was.

"They also said the lice would wash right off, and any that didn't would be gone in a couple of days. They only survive on pelicans."



FOUND — Cultural Resources Management archaeologists discovered a 1900s tricycle on a base homestead during one of their many field surveys earlier this year. The find exhibits a unique design which included a carriage-like seat with a backrest, two large rear iron wheels, a smaller front iron wheel, a steering handle, two treadles, and a wheel shaft that controlled the axle beneath the seat.

Archaeologists find 100-year-old tricycle

Earlier this year, archaeologists found a children's tricycle in a refuse deposit near an early homestead site at Edwards Air Force Base (AFB), Calif. This find may serve as a valuable clue about life on the base in the early 1900s.

"Its age and the fact that others have not been found on base make it unique for our area," JT3/CH2M HILL archaeologist Barry Boyer said. The tricycle was found with other small artifacts such as dishes, cans, bottles, and oil lamp and machinery parts.

The children's toy is among the more significant historic-period artifacts to have been found at Edwards AFB and archaeologists believe it will share information about homesteader life in the area that became Edwards AFB.

"Homesteading could be hard, backbreaking work. While home-

steads got free land, they paid in hard labor in order to 'prove up' and get their deeds. They were typically cash poor and labor rich," base archaeologist Rick Norwood said.

Homesteaders would occupy land for at least five years and show proof of cultivation and improvement before they could be given a homestead patent, or deed. The tricycle shows that this particular homestead housed children.

"It shows that there were children in the family group and that there was enough income to afford recreational toys for them at some point in time," Boyer said.

During internet and archival research, base archaeologists found photos and advertisements of the children's tricycle featured in the 1900 and 1902, but not the 1908, Sears, Roebuck and Company



INVOLVED — Former 95th Air Base Wing Commander, Col. Drew Jeter is seen at left talking with children from Kristie Grubb's second grade class from Bailey Elementary.



CUTTING RIBBON — From left, Conservation Branch Chief, Gerald Callahan, Environmental Management Division Chief, Robert Wood, Col. Jeter and Natural Resources Manager Mark Hagan cut the ribbon with kids for the walking tour at Piute Ponds in May.

Piute Ponds walking tour opens with ribbon cutting ceremony

Base officials cut the ribbon for the opening of an observation deck and a self-guided walking tour at Piute Ponds in May.

Two elementary school children helped the former 95th Air Base Wing commander, Col. Drew Jeter, cut a ribbon to signify the installation of the deck and several informational signs placed along a wide walking path that loops around some of the dikes at the ponds. Col. H. Brent Baker Sr., became the 95th Air Base Wing commander in June.

Piute Ponds, a man-made wetland, is located in the far southwest corner of the base. It was formed in 1961 when Los Angeles County built a dike along Avenue C on base to prevent treated effluent from its District 14 Wastewater Treatment Plant from flowing onto the Rosamond Dry Lakebed.

"If you haven't been here before, you'll be surprised what you find when you get here," Col. Jeter said, as he looked in the faces of a class of second graders from Bailey Elementary School, which is located on the base. The class, taught by Kristie Grubb, was at the ponds on a field trip.

"These ponds are man-made, but we are lucky to have them. I learned first-hand the educational value of the ponds when my daughter was in Ms. Grubb's class last year, and she told me all the amazing things she learned about the ponds from the field trips

here," he said.

The newly installed facilities include a welcome sign with a map showing the route of the walking tour, six signs that provide information about the plants, animals, and insects that inhabit the area, and a covered observation deck that provides visitors some protection from the elements.

"The signs are well placed and have just the right information on them," said Grubb, who has been taking classes to the ponds for eight years. "And last time we were here, we ate our lunch at the observation deck, where we were more protected from the wind."

"The kids love coming here. I love to watch the look on their faces when they see all that water," Grubb added.

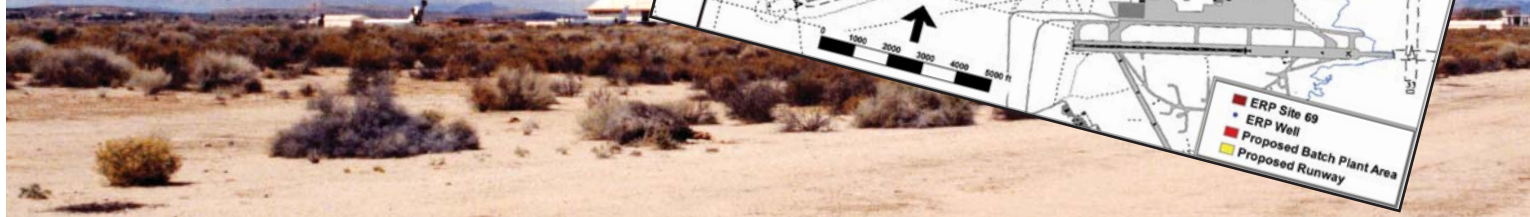
Piute Ponds is a particular benefit for migrating birds. It is located on the Pacific Flyway, which is a common route for many species of birds as they travel south for the winter or north in the spring.

More than 200 species of birds have been documented in the area.

Those who want to visit the ponds must request access from Environmental Management. Call 661-277-1401 to request an access letter.

"We have people come from all over the country to watch birds at Piute," said Mark Hagan, Natural Resources manager. "An access letter is required because we want to ensure everyone is safe and secure while they're out there."

Air Force sets proposal for cleanup at Site 69, located on Main Base flight line



EXTENT — The map shows the estimated extent of buried debris at Site 69. A temporary runway may be installed at the site. A final decision on the exact location of the temporary runway is pending.

If the base makes a decision to locate a temporary runway at the Environmental Restoration Program's Site 69, Air Force environmental engineers recommend removal and on-base disposal of buried and surface debris from the site to the Main Base Active Landfill.

Site 69, the Old South Base North Landfill, is located in the Cantonment Area approximately 1,000 feet north of Main Base Active Runway 04/22 and encompasses approximately 28 acres. Debris was first deposited at Site 69 in the 1940s. The surface of the site is currently covered with scattered rusted cans, broken glass, metal wire, and railroad debris. Waste is also deposited in scattered underground pits throughout the site.

The Air Force conducted a geophysical survey at Site 69 to map the extent of the buried wastes. Four areas, totaling almost an acre, were identified as possible locations where wastes could be buried. Ten test pits excavated in these areas in 1995 verified the presence of debris. Soil samples were also collected and sent to off-base laboratories to identify what chemicals were present.

Low levels of fuels, solvents, pesticides, metals, and other material were detected in the soil samples collected at Site 69. However, the test results indicated that none of these contaminants were detected at concentrations high enough to threaten the groundwater. Groundwater occurs approximately 50 feet below ground surface.

As part of the remedial investigation at

the site, the Air Force calculated the potential risk to human health if future residents or industrial workers at Site 69 are exposed to the contaminants in the soil through ingestion, inhalation, or skin contact.

The cancer risk for hypothetical future residents or industrial workers exposed to the soil was calculated to be generally acceptable. The Hazard Index for hypothetical future residents exposed to the soil is unacceptable. However, the majority of the risk identified by the Hazard Index is from metal and other elements detected in only one of the total 15 samples, and the risk is likely overstated. The Hazard Index for industrial workers is acceptable.

Technical experts completed an ecological risk assessment and determined that there is no consistent and substantial risk from the contaminants to the plant and animal communities as a whole because the contaminants are isolated to a single "hot spot."

Based on these risk assessments, the Air Force believes that there is no significant risk from the soils present at Site 69. There may be hazards associated with the buried debris at the site. Therefore, the Air Force proposes Removal and On-Base Waste Disposal of the Buried and Surface Debris (Consolidation at the Main Base Active Landfill) as the preferred alternative for preventing people and animals from contacting these wastes. This alternative includes excavation and removal of all surface and buried debris and stained soil, backfill and compaction of clean excavated soils, recycling of all suitable materials, and disposal of wastes. If the Main Base

Landfill cannot be used for waste disposal, an off-base disposal facility would be used at an additional cost.

The Air Force evaluated three alternatives in addition to the preferred alternative – No Action; Land Use Controls; and Removal and On-Base Waste Disposal of the Buried and Surface Debris (Consolidation at Site 29).

The No Action alternative would not cost anything, but there also would be no protection of people or animals from surface or buried debris.

The Land Use Controls alternative would restrict access and land use at Site 69 to people, but not animals. Removal of the debris would still be required if construction were to take place in the area. This alternative would cost an estimated \$19,000 to implement.

The Removal and On-Base Waste Disposal of the Buried and Surface Debris (Consolidation at Site 29) alternative is similar to the preferred alternative, except that waste that could not be recycled would be taken to Site 29, the South Base Abandoned Landfill. This alternative would cost an estimated \$278,000 to implement, and would need to be implemented in conjunction with the installation of an engineered cover at Site 29, which would entail additional cost.

The preferred alternative, Removal and On-Base Waste Disposal of the Buried and Surface Debris (Consolidation at the Main Base Active Landfill), would cost an estimated \$280,000 (if the Main Base Landfill can accept the waste), and would return the site to unrestricted use.

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Published data and documents relating to the Environmental Restoration Program are available for public review in information repositories at four locations. The current information repositories are located in the cities of Boron, Lancaster and Rosamond, as well as Edwards AFB. They are updated when new documents are released.

If you have any questions about information in the repositories, please contact Gary Hatch, Environmental Public Affairs at (661) 277-1454 or through e-mail at 95 ABW/PAE@edwards.af.mil.



Location	Days and Hours of Operation	
Edwards AFB Library 5 W. Yeager Blvd. Building 2665 Edwards AFB, Calif. (661) 275-2665	Mon-Thurs	9:30 a.m. - 7 p.m.
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	Sat & Sun	10:30 a.m. - 6 p.m.
Kern County Public Library Wanda Kirk Branch 3611 Rosamond Blvd. Rosamond, Calif. (661) 256-3236	Tue & Wed	Noon - 8 p.m.
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Los Angeles County Public Library 601 W. Lancaster Blvd. Lancaster, Calif. (661) 948-5029	Mon-Wed	10 a.m. - 8 p.m.
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Col. Vernon P. Saxon, Jr. Aerospace Museum 26962 Twenty Mule Team Road Boron, Calif. (760) 762-6600	Mon-Sun	10 a.m. - 4 p.m.



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